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DPD 5361-59

Recent Technical Proposals or Ideas

Office of Scientific Intelligence

1. Position Location by Correlation Techniques: Under a contract with the Rome Air Development Center the Ramo-Wooldridge Corporation has been continuing experimentation with correlation techniques for position location of radio transmitters at long ranges. Using a 50-mile base line they have obtained an average error of 4° using a 20 second average of readings and a 1° error using a 10 minute average of readings at a range of 2,000 miles. It may be recalled that the Corporation briefed interested components of the Agency on their correlation techniques about two years ago and that their progress was reviewed last summer by TSS [redacted] 25X1
OSI is continuing to monitor the development of the position location technique.

2. Long Range Infrared Detectors: Infrared specialists of the Eastman Kodak Corporation have agreed that it would be feasible to develop an infrared detection and tracking device for airborne use with a range in excess of 1,000 miles utilising a curcular multicell array of Ektron uncooled lead sulphide cells. These cells, arranged in concentric circles, would permit a missile infrared response entering through the optics to be tracked across the array. The Ramo-Wooldridge Corporation has confirmed the feasibility of digitally recording each cell as to relative position and the transmittal of each cell response to a time-marked magnetic tape. Azimuth and altitude crossing data on the missile would be obtainable from the conjunction of the arrival and departure signal times and the known cell locations. The individuals concerned at Eastman Kodak apparently believe that such a system is entirely feasible and would only require the design and construction of necessary equipment. The Ramo-Wooldridge Corporation believes that for airborne use it would be necessary to utilize an existing stabilized platform.

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